Hydrology and Earth System Sciences Discussions

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Interactive comment on "Effect of seasonal dynamics of vegetation cover on land surfacemodels: a case study of NOAH LSM over a savanna farm land in eastern BurkinaFaso, West Africa" *by* F. Bagayoko et al.

Anonymous Referee #3

Received and published: 3 October 2006

At several places in the manuscript there are problems with units. For instance, the Roughness Reynolds number (p 2761) is attributed units of m**2/s, whereas this is a dimensionless number. The surface exchange coefficient (Ch, see p 2762) is given units of m/s, while from its definition in eq. (7) one would deduce that it is a dimensionless quantity (I guess that in (7) a wind speed was forgotten somewhere). In eq. (16) a soil moisture value in m**-3 kg**-1 (?) is subtracted from a root density (unitless).

There are many problems also with the accuracy of statements, such as, e.g., on p.

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2764, where VPD is referred to as "air pressure deficit" (probably the authors mean vapour pressure deficit). On p 2764 on line 10, a sum is written for the variable omega_bar, but the summation index does not appear in the argument of the summation. In Table 1, the root distribution over 4 layers is characterized by 7 values which do not add up to 100 % (the first 4 numbers do, however, so I suppose that the last three were added unintentionally).

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 3, 2757, 2006.

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